

The Compliance Function: Microfascism and the Double Exclusion in Daniel Keyes'

Flowers for Algernon

Even a feeble-minded man wants to be like other men (Keyes 1994, 139).

Charlie Gordon in *Flowers for Algernon*

In *Flowers for Algernon* (1966), protagonist Charlie Gordon is transformed from a man of low intelligence into a genius which allows him to gain a new perspective on his former life. Not only must Charlie confront the demons of his past, but he must also prepare himself for the dark future that awaits him.

While many modern-day scholars focus on the novel's treatment of autism, disability and medical ethics (Cline 2012, Ulliyatt 2014, Loftis 2015, Ghoshal and Wilkinson 2017) the novel also has much to offer in terms of its use of exclusions and other means of biopolitical control. While Charlie Gordon is cast out and constituted as a form of 'bare life' (Agamben 1998), the novel also adds another dimension to the mix, namely the role of the machine. In this case, Charlie isn't just cast as a sub-human outsider, but he is also framed within a cybernetic network, cast as a faulty machine that needs to be fixed, or a computer virus that needs to be cured. Indeed, his programmatic operating system can be read as a form of microfascistic control, such as is described by Deleuze and Guattari in *A Thousand Plateaus*:

Only microfascism provides an answer to the global question: Why does desire desire its own repression? [...] Desire is never separable from complex assemblages that necessarily tie into molecular levels, from micro-formations already shaping postures, attitudes, perceptions, expectations, semiotic systems, etc. Desire is never an

undifferentiated instinctual energy, but itself results from a highly developed, engineered setup rich in interactions: a whole supple segmentarity that processes molecular energies and potentially gives desire a fascist determination (1987, 251).

In this case, Charlie's computer code – his operating system – is shaped by microfascistic desire rooted in the many complex interactions with those around him. This leads him to spend much of the novel trying to please others and fit in, despite the fact that the group continues to exclude him on account of his faulty code.

Just as he oscillates between the human and non-human, so Charlie Gordon also oscillates between the human and the machine, or rather, the *robot* – taking us beyond the human/bare-life model described by Giorgio Agamben. To this end, this paper will examine the impact of Charlie's double exclusion as a man of low intelligence and a man of genius, and the role of microfascistic programming as a means of social control. It will ask: how and why does Charlie desire his own repression, and how does his exclusion serve to replicate societal codes and manufacture consent to sovereign rule?

Introducing Charlie Gordon

First published as a short story in 1958 and then as a novel in 1966, *Flowers for Algernon* has won both the Hugo and Nebula Awards for science fiction. It has also been adapted several times for television, theatre and radio, including the Academy-award winning film *Charly* (1968). The novel is presented as a series of diary entries written by protagonist Charlie Gordon, a floor sweeper with an IQ of 68. As a man of low intelligence, Charlie struggles to form words in his early entries, but tries nonetheless: 'all my life I wantid to be smart and not dumb' says Charlie, but 'I ferget a lot' (3). As readers we can't help but empathize with Charlie. Though he has limited intelligence, he tries extremely hard, and reads and writes very

well for someone with his low mental capacity. These good intentions attract the attention of a group of scientists working on a way to enhance human intelligence. To them, Charlie seems to be the ideal subject, and as Charlie reports, ‘they will see if they can use me’ (1).

In the lead-up to the experiment, Charlie is introduced to a mouse named Algernon – a creature who has already successfully undergone the same experiment. Charlie can’t help but be impressed by Algernon’s intelligence, and the ease with which the mouse beats him in simple tests, with Charlie exclaiming that ‘I dint know mice were so smart’ (5–6). However once Charlie has undergone the experiment, it is not long before the tables are turned (22). After a few days have passed he is already remembering things from three days previously, and soon starts making corrections to his own work (11). The change that overcomes Charlie is quite remarkable, and as he learns new things, we see the fruits of his labours in his written diary entries. For example, when Charlie learns about punctuation, he soon starts to apply his learning to his written notes, with noticeable effect (27–28).

But Charlie’s progress doesn’t stop there. He soon starts to read, and discovers the likes of Shakespeare, Milton, Newton, Einstein, Freud, Plato ‘and all the other names that echo like great church bells in my mind’ (49). However, Charlie’s learning also comes at great cost. As his intellect grows, he also becomes disillusioned as he is no longer the same ‘Charlie’ he once was. People treat him differently, and he starts to notice that many of his friends are not the people he thought they were. These changes ultimately lead to him losing his job at the bakery as the employees there are ‘all scared to death’ by the changes that have come over him (72–3). As Charlie observes: ‘I had betrayed them, and they hated me for it’ (74).

Yet even still Charlie’s intelligence continues to grow. While he may have accepted being cut-off from his bakery friends as a consequence of his altered state of being, he soon finds himself set apart from the professors whom he looked up to for so long: ‘I was seeing

them clearly for the first time—not gods or even heroes, but just two men worried about getting something out of their work’ (49). Soon after this, Charlie runs away, taking Algernon with him. Cut off from the restrictions of his institutionalized self, Charlie is at his most liberated, and engages in an ‘anti-intellectual binge’ (137). However, his binge does not last long. Algernon’s mental health starts to fade, and Charlie discovers that he too will soon experience the same fate. So, from a point of absolute genius – ‘a peak of light and understanding’ (167) – Charlie starts to decline. Faced with a grim future and ultimately, death, Charlie is forced to prepare himself for the worst. The book ends with Charlie’s final diary entry, and last goodbye to his readers, ending: ‘P.S. please if you get a chance put some flowers on Algernons grave in the bak yard’ (216).

Charlie as animal

As he develops through the novel, Charlie becomes increasingly aware of the complex web of power relationships at work upon him, and his unique position within a system that never quite welcomes him in. He is for the most part an outsider – an exile, or what Giorgio Agamben might describe as a *homo sacer*: an individual ‘situated at the intersection of a capacity to be killed and yet not sacrificed, outside both human and divine law’ (1998, 73). Initially, Charlie is an outsider on account of his base intelligence and lack of human qualities. His ‘friends’ at the bakery regularly exploit him for their own benefit or general amusement. In one notable incident they show him off as an exhibit at a party, treating him as an object of ridicule before leaving him alone in the street (21–22). This example demonstrates Charlie’s unique insider-outsider relationship with the people around him. Even on a day-to-day level, Charlie is an outsider, while paradoxically still being situated firmly within the bakery fold. If anyone does something wrong, they are described as a ‘Charlie Gordon’, yet Charlie himself remains blissfully ignorant of the real meaning behind the slur

(17). Because at this point Charlie does not understand the context of his outsider status, he thinks the people from the bakery are being friendly, which only adds to his isolation, and makes him complicit in his own exile. It is only later with the insight of his newfound intelligence that he realizes the truth of the matter, and the way he has been marked for exclusion all along.

Throughout his time as a man of low intelligence, the people of the bakery treat Charlie like an animal, or even less than an animal, for his human form refers back to the possibility of the 'normal' human he could become. Not only is Algernon treated with more respect than Charlie, but he is even depicted as possessing more human traits, with Charlie observing, 'I never new before that I was dumber than a mouse' (16). In response, many of Charlie's friends perceive his low IQ as a form of sickness. Before his operation, the people of the bakery bring him a chocolate cake and say they hope he will get better soon (9) – as if he is worthy of pity, or indeed that his low intelligence is something that needs to be fixed or cured. From these examples we can see how Charlie's animalisation leads to him being cast as a form of bare life, the production of which Agamben describes as the 'originary activity of sovereignty' (1998, 83). This is an important element of power, and Charlie's construction as *homo sacer* demonstrates how exclusions construct and maintain power relationships within a social setting. According to Agamben:

What defines the status of *homo sacer* is therefore not the originary ambivalence of the sacredness that is assumed to belong to him, but rather both the particular character of the double exclusion into which he is taken and the violence to which he finds himself exposed (1998, 82).

Charlie's lack of intelligence and perceived lack of human qualities place him in a unique position. He is the subject of pity, scorn and derision and is excluded from normal social interactions, yet it is never a full exclusion – his exclusion is at the same time an *inclusion*, as the very process of exclusion preserves and enshrines the rule for inclusion. As Agamben suggests, 'what is excluded in the exception maintains itself in relation to the rule in the form of the rule's suspension. *The rule applies to the exception in no longer applying, in withdrawing from it*' (1998, 17). Building on this argument Agamben also argues that 'exception is the structure of sovereignty [...] it is the originary structure in which law refers to life and includes it in itself by suspending it' (1998, 28). Charlie's initial exclusion and production as a form of bare life then is an essential element in the operation of power. His exclusion also goes to show the paradox of sovereignty and the law; that being, "the law is outside itself," or: "I, the sovereign, who am outside the law, declare that there is nothing outside the law [...]" (1998, 15).

Yet Charlie's exclusion is not just limited to the time at which he spends as a floor sweeper in the bakery. As science transforms him into a man of supreme intelligence, a new exclusion is formed and Charlie goes from being a *homo sacer* on account to his base nature, to being a *homo sacer* on account of his exceptional intelligence. Though the reason for the exclusion changes, the result is still the same, and Charlie is cast out and restricted from taking part in normal everyday life. Thus, as soon as Charlie's intelligence outstrips the consensus for what is 'normal', he is fired from the bakery as his colleagues are 'all scared to death' by him (73); he moves from being an object of sympathy to an object of fear. Not only that, but he soon outstrips his professors, such that they come to envy him: 'Before, they had laughed at me, despising me for my ignorance and dullness; now, they hated me for my knowledge and understanding' (75). So again, Charlie finds himself as an exception – a fact which he points to in his rather astute observation: 'The idea seems to be: use an expression

only as long as it doesn't mean anything to anybody. *Exceptional* refers to both ends of the spectrum, so all my life I've been exceptional' (106). Thus, Charlie represents the final limit case of Agamben's theory. There is no hope of salvation as he was never fully included to begin with; for Charlie Gordon, the exception is the norm, and he is destined to remain a pariah no matter what.

Charlie as robot

Beyond his being ostracized and cast as a form of bare life, Charlie Gordon is also simultaneously cast as a machine or biological robot. This is a recurring theme in American science fiction of the post-war period in which cultural, social and political tensions coincided with a rapid rise in consumer electronics, and computer technology.

Written in the early years of the computer revolution, *Flowers for Algernon* was published as a short story in 1958, a few short years after Claude Shannon demonstrated his mechanical mouse Theseus in *LIFE* and *Time Magazine* in 1952.¹ These articles featured pictures of information theory expert Shannon alongside a metallic maze in which his robot mouse would 'learn' the trail through trial and error in order to dash towards the symbolic cheese. While Shannon's work demonstrated the wonders of modern technology and applications for telephone switching systems, the *LIFE* article even suggested that biological lab mice had been 'joined and outclassed by a mechanical mouse' (45) – demonstrating a blurring of the line between the biological and mechanical, the artificial and the organic.

This early post-war period was also marked notably by the first use of the term 'artificial intelligence' by John McCarthy in 1955.² This watershed moment helped usher in the new era of computer studies, and also helped establish a new field of cognitive psychology, where scientists started to think of the human brain as a form of machine.³ By the time *Flowers for Algernon* was published as a novel in 1966, the U.S. had seen the launch of

its first successful weather satellite TIROS-1 (1960) and the birth of colour television (1965). A few years later and the U.S. would complete its first moon landings (1969), followed soon after by the invention of the first single chip microprocessor (1971).

Throughout this period, there was much cultural anxiety surrounding new technology, with emerging fields of study blurring the boundaries between the human and the machine, in particular the human and the robot. While modern technologies helped bring about a whole range of new consumer goods and services, there existed at the same time a level of doubt and uncertainty about technologies that represented at once both a benefit and a threat to traditional way of life. This conflicting, often contradictory relationship can also be seen clearly across the popular press of the period, with hard-hitting features on nuclear war sitting alongside adverts for an array of goods and services made possible with the same computer technology. In one example, the 11 February 1957 edition of *LIFE* featured an article on the SAGE nuclear defence system bookended by adverts for maple-flavoured syrup and a set of cooking sauces.⁴ Similar tensions also came to light in the science fiction literature of the period, with writers such as Frederik Pohl depicting various worlds of rampant consumerism where advertising men rule the world and robots are used in place of humans.⁵

These same anxieties also worked their way into the way machines themselves were depicted in the social imaginary, reflecting real-world concerns about the new ‘robot brains’ that some people felt were starting to rule the world. This led to portrayals of computers often oscillating between the omniscient electronic brain on the one hand, and the intellectually inferior machine with no common sense on the other. Indeed, Hans Moravec notes that, ‘The discrepancy between the giant brain and the mental midget image of computers became worse in the late 1960s, and early 1970s’ (1999, 21). This observation can be mapped directly onto the depiction of Charlie Gordon in *Flowers for Algernon*, a character who functions just like a biological machine and who similarly oscillates between the ‘giant brain’ and ‘mental midget’

that Moravec describes. This machine-like comparison goes far beyond the way Charlie is represented within the novel, and extends to also encompass the way he is monitored by the scientists, and even how he is produced. Indeed, the diary form itself is a kind of surveillance, in which Charlie becomes a literal 'learning machine' using the surveillance feedback loop to reflect on his actions and self-program as his intelligence grows.

This robotic self-programming function is similar to what Deleuze and Guattari describe as microfascistic behaviour – self-imposed controls in which individuals repress elements of their subjectivity in order to conform to societal norms. According to Deleuze and Guattari:

Only microfascism provides an answer to the global question: Why does desire desire its own repression, how can it desire its own repression? [...] Desire is never separable from complex assemblages that necessarily tie into molecular levels, from microformations already shaping postures, attitudes, perceptions, expectations, semiotic systems, etc. Desire is never an undifferentiated instinctual energy, but itself results from a highly developed, engineered setup rich in interactions: a whole supple segmentarity that processes molecular energies and potentially gives desire a fascist determination (1987, 251).

In the case of *Flowers for Algernon*, Charlie forms his internalized microfascisms through his many interactions with authority figures such as his teacher Alice Kinnian and the scientists Professor Nemur and Dr Strauss. There is also the influence of his parents, Rose and Matt. While at the start of the novel Charlie can't remember anything of his parents, as he comes into his intelligence he experiences flashbacks that give insight into the conditioning effect they have on him, with many of their fears and anxieties replicating themselves within him.

Over time these fears and anxieties become embedded in Charlie's subconscious and develop into microfascisms that form a key part of his core operating system. The reason these microfascisms are so effective is because they are driven by the individual, and force subjects to pre-empt a rule before a sovereign decision has been made. They are so pervasive that often subjects don't realize they are at work – as we see in the case of Charlie and other characters throughout the text.

It is significant here that internalized microfascisms operate much like a computer program or operating system, dictating the behaviour of subjects who are compelled to behave in a predictable, robotic fashion. In each case, the very possibility of being seen as being 'outside' or 'different' to normal social practice forces the characters in *Flowers for Algernon* to modify their behaviour, or to reassess their stance in relation to the accepted norm. From the very outset we are confronted with Charlie's constant efforts to fit in and to understand, even if he doesn't fully grasp those things he *thinks* he understands. For example, when he first meets the scientists he is introduced to the Rorschach Inkblot Test, looking to see 'pictures in the ink' (2). But Charlie doesn't quite inhabit the same world as everyone else. He thinks he's failed as he doesn't see pictures, and thinks that he either needs to be taught to see pictures or that 'mabey I need new glassis' (2). He is also introduced to what he studiously notes down as the 'THEMATIC APPERCEPTON TEST. I dont know the first 2 werds but I know what test means. You got to pass it or you get bad marks' (4). In both instances, the word Charlie certainly does understand is the word 'test' – a word that is so often associated with either success or failure. Charlie is naturally repulsed by the idea of failure, and thus struggles to 'pass' everything he does.

This drive to succeed is a key component in Charlie's compliance with power, and demonstrates the far reaching and often subtle impact that ideological codes and values can have. As a man of low intelligence, Charlie associates success and popularity with those

people of high intelligence. As he so often expresses in the text, 'I just want to be smart like other pepul so I can have lots of frends who like me' (9). Even very early on in the text, Charlie has keen aspirations, and is driven to succeed and be seen as a success. Though the world he inhabits is quite small by most definitions, even still Charlie aspires to 'talk with them [his work colleagues] about things and maybe even get to be an assistint baker' (13). These aspirations lead Charlie to monitor and adjust his behaviour via a cybernetic feedback loop responding to his own inbuilt set of programmatic codes. Only in this case, Charlie's operating system doesn't quite function in a way most people might expect. As such he is unable to process the information that is fed to him, and while he may act with the best of intentions, his faulty outputs lead to his ostracism from the community group.

The social machine

Clearly, desire is an important component in exercising Charlie's internalized microfascisms – his personal computer code – and his drive to fit in and succeed. Though not an origin as such, much of Charlie's early identity formation can be traced back to his parents, who we meet through a series of flashbacks. In Charlie's recollection, his parents associate education with success – that you can only be 'somebody' if you go to college (50–51). As the story progresses we learn that his mother Rose was instrumental in instilling a sense of failure in him from an early age. For much of his childhood she refers to him as being 'sick' and spends almost all of the family savings on 'quacks and phonies' in order to try and cure him (100). On reflection, Charlie realizes that it was his mother's desire for him to be smart that gave him his own strong motivation, describing as he does, 'Her fear, her guilt, her shame that Charlie was a moron. Her dream that something could be done' (101).

Appearances are incredibly important to Rose, and looking back, Charlie observes that she was 'Always working to show the neighbours what a good wife and mother she was'

(181). This in itself is an example of her own microfascistic desire to fit in and to be seen as looking as if she were doing well for herself. As Charlie suggests: ‘The most important thing had always been about what other people thought—appearances before herself or her family. And righteous about it’ (181). Unfortunately for Charlie, this meant being kept away from others, even at a very young age, ‘so that other people wouldn’t know anything was wrong’ (181). Even in his early developing years then we can see how Charlie is already set up as an Agambian *homo sacer* – as an outsider who exhibits abnormal traits, or rather a broken machine who does not conform to normal social codes. This transition to outcast was brought about in part by his mother Rose, though we cannot call her the origin of this move, as her own desire is similarly influenced by a complex web of power relationships; in this case, forcing her to follow a path where her ‘abnormal’ son is cast out, and in which she believes she is a failure for bringing him into the world.

Each of these examples demonstrates the complex and pervasive nature of power. On a day-to-day level the sovereign cannot exercise direct control over individual citizens, however its power can still be exercised indirectly through segmented means, be it through formalized State apparatus or those micro-transactions between individuals. According to Deleuze and Guattari at least, the power centre is at the border between the segmented line and quantum flow – it is ‘defined not by an absolute exercise of power within its domain but by the relative adaptations and conversions it effects between the line and the flow’ (1987, 217). As we see in the example of the office manager, the roles of the manager are never always clear-cut – the manager is only recognisable when he or she becomes crystallized from a macro-organisational perspective, as the defined segment ‘the office manager’ (Deleuze and Guattari 1987, 250). Because of the indecipherable location of power, it follows then that ‘power centers are defined much more by what escapes them or by their impotence than by their zone of power’ (Deleuze and Guattari 1987, 217).

Moving beyond the bureaucratic nature of power and the complexity of power flows, we should also consider the role of domination between individuals. In *Society Must Be Defended*, Michel Foucault claims that domination and the will to dominate is evidenced not just in the Sovereign King (in Foucault's example) but 'subjects in their reciprocal relations; not sovereignty in its one edifice, but multiple subjugations that take place and function within the social body' (2003, 27). Foucault then draws attention to the circulating nature of power (as do Deleuze and Guattari), but further emphasizes the micro-domination of individuals. As Foucault continues:

Do not regard power as a phenomenon of mass and homogenous domination—the domination of one individual over others, or one group over others [...] Power must, I think, be analysed as something that circulates, or rather as something that functions only when it is part of a chain (2003, 29).

We should be careful then not to read power as necessarily all of the same homogenous form. Though there may be a central guiding force, a machine-like director, shaping the overarching direction of power flows, we can see here how microfascisms aren't solely connected with sovereign power, but can also be connected with the power of individual subjects and the domination of one individual over another. These relationships are not fixed, but rather they circulate, and are further complicated by the fact that all interactions must sit within the wider framework of the sovereign State. Yet on a micro level there is scope not just for the exercise of sovereign power, but also power and domination between individuals, whether for the purpose of supporting the sovereign decision, or for other personal gain and merit.

As we have seen in the example of Charlie working in the bakery, his 'friends' would often exploit him for their own pleasure and amusement such as the time he was shown off at

a party (21–22). So, not only can we read this as an example of how exclusions are used to maintain sovereign power, but we can also see it as an attempt to establish dominance by the individual members of the bakery team. Charlie has clearly been allocated the lowest place in the hierarchy while the others use him as a way to establish their dominance and secure their own status within the group. Therefore, while there is certainly an element of segmentary sovereign power at work here, we are also witness to a social power struggle within the bakery, driven by the need to fit in with other members of the group and the further need to establish dominance and exercise power over the things that the bakers at least have some small control over. It could even be argued that the abuse of Charlie serves as a ‘release mechanism’ for the bakers, who in reality have very little power, but what power they do have is exercised in a way that is not ultimately detrimental to the State.

Unfortunately for Charlie there is no real freedom or means of escape from the complex power flows that beset him on all sides. As an outcast he is incapable of being reintegrated within the social network – he is as much a computer virus or biopolitical infection as he is a broken machine in need of repair. This leads Charlie to seek solace in his own company, but he soon finds that this option only serves to exacerbate the problem. It is interesting then that Charlie comes closest to reintegration when he embarks on his anti-intellectual binge towards the latter part of the novel (137). But even then, the memory of his past haunts him and he realizes it’s not the movies he craves, but to ‘be with the people around me in the darkness’ (137). However, it’s not just memories of the past that haunt him; he is also haunted by the microfascistic codes that he takes with him. At one point he sees a child in a restaurant who reminds him of his former self. This causes him to lose control and he later admonishes himself for his behaviour, noting how ‘I cursed myself for losing control and creating a scene’ (138). He realizes that the child with learning difficulties stirred difficult memories within him, admitting that, ‘Even a feeble-minded man wants to be like other men’

(139). This example recalls a similar argument suggested in Daniel Defoe's *Robinson Crusoe* (1994; original published in 1719) – the first book Charlie reads when he comes into his genius (24). In the novel, Robinson gets stranded on a remote island, but ends up replicating the same power structures that subtly worked upon him back home. Just as Robinson Crusoe repeats the cultural norms and values of the British Empire on his remote desert island, so Charlie Gordon also repeats the same codes implanted within him, even though he is ostensibly 'free' to act in any way he wants. Only here we see that what Charlie 'wants' is to be integrated and included in the group – demonstrating again the subtle nature of microfascistic power structures from which Charlie can never truly escape.

No freedom, no escape

Flowers for Algernon is a complex and deeply moving novel that proactively engages with biopolitical concepts and amorphous subjectivity blending the human, the animal, and the machine. Though Charlie Gordon may fail to integrate as a 'normal' individual, this is not to say that he doesn't serve a valuable function within the framework of the biopolitical State. Indeed, he arguably provides *more* value than a single compliant individual, for his role as outcast constitutes him as a sacrificial pariah figure who acts as failsafe and a paradigmatic example to others. In this sense, Charlie serves to instil compliance in others – he serves a compliance function that ensures the majority of subjects adhere to sovereign rule. Through his suffering and sacrifice so cultural norms are deployed and replicated throughout the system, promoting homogeneity over heterogeneity, similarity over difference, order over chaos.

Even as he falls into steep decline so Charlie remains force of compliance right to the very end. In the closing lines of his diary he even reminds Professor Nemur not to be 'such a grouch when people laugh at him' (216), suggesting the Professor removes himself too far from the social group and should make further efforts to integrate. While Charlie himself may not

be deemed worthy of inclusion, or even sympathy for his demise, still he ensures that others are recognised within the framework of the inclusion-exclusion dynamic. While Charlie himself is not deemed worthy of sympathy, he remains a *homo sacer* par excellence right to the very end, a character for whom there can be no freedom, no escape. Even in death, Charlie cannot shed his outsider status, for even the mouse Algernon is worthy of more grief than he, and the memory of his exclusion remains.

Endnotes

1. See: 'Better Mouse: A Robot Rodent Masters Mazes', *LIFE*, 28 July 1952, pp. 45–46; 'Mouse with a Memory', *Time Magazine*, 19 May 1952, p. 61.
<http://search.ebscohost.com.ezproxy.lancs.ac.uk/login.aspx?direct=true&db=asn&AN=54167632&site=ehost-live&authtype=ip,shib&user=s1523151> (accessed 24 August 2017).
2. The term 'artificial intelligence' was used in a proposal submitted in 1955 for a summer research project to take place the following year. Paul N. Edwards suggests that McCarthy may have coined the term 'for the grant proposal' (1996, 253). See also Hans Moravec (1999, 20).
3. The computer was absolutely critical for the emerging discipline of cognitive psychology, prompting scientists to think of the brain as a computer or 'thinking machine'. Howard Gardner for example argues 'if a man-made machine can be said to reason, have goals, revise its behavior, transform information, and the like, human beings certainly deserve to be characterized in the same way.' (1985, 40). Beyond the computer itself, Bernard J. Baars highlights the importance of the term AI as a concept that 'provides the theoretical core of cognitive science' (1986, 181). Though many debate the precise moment the field came into being, Gardner records the 'nearly unanimous agreement [...] that cognitive science was officially recognized around 1956' (1985, 28).
4. See: 'Pushbutton defense for air war: complex SAGE system is built by U.S. to stop enemy bombers', *LIFE*, 11 February 1957, pp. 62–68. Advertised referenced feature on p. 61 and p. 69.

5. Notable examples include Frederik Pohl's collaboration with Cyril M. Kornbluth, *The Space Merchants* (1952), as well as single-authored short stories 'The Midas Plague' (1954), 'The Tunnel Under the World' (1955), and 'The Waging of the Peace' (1959).

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